

10/782,749

REMARKS

Accompanying this Substitute Preliminary Amendment is (1) a new Consent of Assignee and (2) a Statement Under 37 CFR 3.73(b). Both individuals, who signed the two accompanying forms, are authorized to sign legal documents on behalf of their company, ZF Friedrichshafen AG, the Assignee of this case (signor Zietlow is head of the Corporate Patent Department of ZF Friedrichshafen AG).

The previously paid filing fee also includes the associated fee for the additional independent claims in excess of three (3) independent claims and the additional claims in excess of twenty (20) claims.

The drawings are amended, per the attached Submission, to overcome noted informalities contained therein—replace the German word “gebremstes” with the English word “Braked”. A new formal drawing, incorporating the requested amendment, is enclosed. If any further amendment to the drawings of this application is believed necessary, the Examiner is invited to contact the undersigned representative of the Applicant to discuss the same.

The above newly entered/amended paragraph(s) of the specification overcome some informalities noted in the specification on file. The undersigned avers that the newly entered/amended paragraph(s) of the specification do not contain any new subject matter.

Please consider the amended claims as well as the newly entered claims upon consideration of this reissue application. The entered claim amendments revise the preamble and eliminate the unnecessary feature of “the output shaft (11) is fixedly connected with a spider (19) of the second planetary set (3) and is fixedly connected with an internal gear (14) of the first planetary set (2)” from independent claim 1. This limitation is not necessary in order to for the claims to distinguish adequately over the prior art of record in this case, including Pierce 5,250,011 (“Pierce `011”).

A fundamental distinction between Pierce `011 and the transmission of the present invention is that the transmission taught by Pierce `011 is only capable of providing 5 forward gears while the transmission according to the presently claimed invention provides 6 forward

gears. The present invention thereby provides an increase of 20% in the number of gear ratios for no increase in the basic planetary gear units.

This distinction between the two transmission arises from the unique combination of switchable and non-switchable connections among the planetary gear set elements of the presently claimed invention when compared to the planetary gear set connections taught in Pierce '011. In particular, and more specifically, the present invention discloses and claims that the sun gear 20 of the third planetary gear set 4 either should not be connected and should not be connectable to any other element of the transmission except the transmission housing. That is, and stated another way, in the transmission of the present invention, the sun gear of the third planetary gear set is either freely rotatable or connectable with the transmission housing by the brake 7, i.e., it is not connectable to any element of any other planetary gear set, such as another sun gear or a spider or an internal gear of the third gear set or of the first gear set or second gear set.

In distinct contrast to the present invention, Pierce '011 does not teach or even suggest this limitation in the connections of the third planetary gear set. That is, according to Pierce '011, the sun gear 54 of the third planetary gear set is permanently connected to the ring gear 40 of the second planetary gear set (see column 3, lines 1-4).

Independent claim 1 expressly recites the limitation "a sun gear (20) of the third planetary set (4) is freely rotatable with respect to the suns, the spiders and the internal gears of the first and second planetary sets and is connectable solely with the transmission housing when the third brake (7) is engaged". Stated another way, claim 1 is fundamentally distinguished over the teachings of Pierce '011 by the limitation that the sun gear of the third planetary set is not connected to or connectable to any other element of any of the gear sets, including the third gear set.

Lastly, each of the independent claims recite that "the spider (15) of the first planetary set (2) is connectable with the housing of the transmission by the second brake (6)". The spider of the first planetary set, according to Pierce '011, is connected to the second clutch C3 and

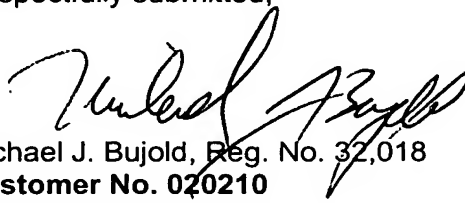
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also to the spider of the third planetary set, but not to the housing by a second brake (6), as presently claimed.

If any further amendment to this reissue application is believed necessary to advance prosecution and place this case in allowable form, the Examiner is courteously solicited to contact the undersigned representative of the Applicant to discuss the same.

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael J. Bujold", is written over the typed name and contact information.

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	1. Gear	2. Gear	3. Gear	4. Gear	5. Gear	6. Gear	R Gear	φ_{ges}
i	4,84	2,98	1,90	1,41	1,0	0,77	-3,28	6,32
φ		1,62	1,57	1,35	1,41	1,30		
	$i_{01} = -3,28$		$i_{02} = -2,43$		$i_{01} = -2,43$			

Fig. 9

	1. Gear	2. Gear	3. Gear	4. Gear	5. Gear	6. Gear	R Gear	φ_{ges}
i	3,87	2,48	1,74	1,38	1,0	0,76	-3,26	5,06
φ		1,56	1,43	1,27	1,38	1,31		
	$i_{01} = -3,26$		$i_{02} = -2,87$		$i_{01} = -1,71$			

Fig. 10

	1. Gear	2. Gear	3. Gear	4. Gear	5. Gear	6. Gear	R Gear	φ_{ges}
i	3,83	2,30	1,62	1,30	1,0	0,79	-3,67	4,88
φ		1,67	1,42	1,25	1,30	1,27		
	$i_{01} = -3,67$		$i_{02} = -2,83$		$i_{01} = -2,22$			

Fig. 11

Braked

GEAR	K1	K2	B1	B2	B3
1				×	×
2			×		×
3	×				×
4		×			×
5	×	×			
6		×	×		
R	×			×	
gebremstes Neutral			×	×	

Fig. 12